Abstract

The present invention relates to a method of interactive visualization and parameter selection for engineering design. Initially, a nominal topology and associated design variables are set. The design variables are treated as being independent of each other for the purposes of a design variable sweep or sensitivity analysis to determine effects of changes in design variables on performance. The results of the sweep are presented to a designer, for example, by a suitable software tool including a graphical user interface. The designer selects design variables and revises their values based on the visually presented results of the sweep and effects a simulation using the revised values. If the results are satisfactory and a stopping condition is satisfied then the method is done. Otherwise, a determination must be made as to whether additional values can be changed or whether a new sweep must be effected. If a sweep is to be made, according the method of the present invention, an optional step is to change to topology prior to sweeping.